

REVISION OF THE GENUS *HETERONYX*, WITH
DESCRIPTIONS OF NEW SPECIES.

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PART III.

The *Heteronyces* still remaining to be treated form the 2nd group of the 3rd of the main divisions into which I have cut up the genus for the convenience of this memoir, but which divisions it will be remembered I do not set forth as at all capable of being regarded as sub-genera, being well aware that if such a grouping were possible (which it has not been to me) it would have to follow very different lines. This (my Section III.) consists of species having the summit of the labrum overtopping the plane of the clypeus, and I subdivide it into two groups distinguished by having 8- and 9-jointed antennæ respectively. The former of these groups was treated of in Parts I. and II. of my revision, and I have now to enter upon the revision of the 2nd group. As in the case of the former I again subdivide the group into two subgroups, one having the claws bifid, the other having them appendiculate. The present Part of the Revision deals with the species having bifid claws. As a rule there is at most not much difference between the claws on the various tarsi,—but nevertheless to make the characters more reliable I base them in each instance on the claws of the hind tarsi. Strictly speaking the claws of all *Heteronyces* are appendiculate and the differences among them are of degree only. The differences consist chiefly in the extent to which the basal piece of the claw is angularly produced, or dentate, at its inner apex. In general, the larger the basal piece in proportion to the apical the more pronounced is the inward projection of the former, so that there are a certain number of species in which,

this inward projection being quite pronounced, while the apical piece is very small, these two (*i.e.*, the inward projection or "tooth" of the basal piece and the apical piece) are not very different from each other in size and the claw has a bifid appearance. Although it does not appear to me really accurate to call this form of claw "bifid," nevertheless as it has been so called by former describers I have thought it better to retain the word in the Latin diagnoses.

I have also included in this subgroup such species (they are very few) as have the claws *abnormal*, the appendiculation being extremely minute and placed close to the tip of the claw, so that the apical piece is only a quarter or thereabouts of the size of the basal piece. Thus, the following will be the definition of the hind claws in the species forming this subgroup:—"the basal piece ending internally in a well defined process at least half as large as the apical piece, or the appendiculation quite minute and apical."

Tabulation of the species of *Heteronyx* having the labrum overtopping the plane of the clypeus, the antennæ 9-jointed, and the claws as specified above.

- A. Hind coxæ not, or scarcely, shorter than lateral suture of metasternum.....
- B. Anterior tibiæ distinctly tridentate externally.....
- C. Surface of elytra normal.....
- D. Middle lobe of trilobed outline* much narrower than the lateral lobes..... *Darwini*, Blackb.
- DD. Middle lobe of trilobed outline very little narrower than the lateral lobes *incola*, Blackb.
- CC. Surface of elytra with wide feeble costæ

* *Vide antea* p. 139.

- D. Trilobed outline of head well defined ; middle lobe narrow ; club of antennæ black..... *potens*, Blackb.
- DD. Trilobed outline of head scarcely apparent ; middle lobe very wide ; club of antennæ pale *aridus*, Blackb.
- BB. Uppermost tooth on external margin of front tibiæ reduced to a mere nick on the outline..... *bidentatus*, Blackb.
- AA. Hind coxæ decidedly shorter than lateral suture of metasternum.....
- B. Club of antennæ black or nearly so. ..
- C. Puncturation of prothorax sparse and lightly impressed.....
- D. Middle lobe of trilobed outline of head from all points of view projecting beyond the lateral lobes which are scarcely defined *aphodioides*, Blanch.
- DD. Middle lobe of trilobed outline of head not appearing to project beyond the lateral lobes which are well defined..... *incultus*, Blackb.
- CC. Puncturation of prothorax strong and close *aspericollis*, Blackb.
- BB. Club of antennæ pale in colour
- C. Relation of labrum to clypeus such that the outline of the head is distinctly trilobed from a certain point of view.....
- D. Middle lobe of trilobed outline appearing rounded.....

- E. Appendiculation of claws very minute and close to apex..... *lividus*, Blackb.
- EE. Appendiculation of claws not particularly minute and close to apex.....
- F. Prothorax closely (*vide ant.* p. 139) punctured.....
- G. Joints 1 and 2 of hind tarsi equal..... *subfuscus*, Macl.
- GG. Joint 2 of hind tarsi longer than 1..... *borealis*, Blackb.
- FF. Prothorax sparingly punctured..... *sparsus*, Blackb.
- DD. Middle lobe of trilobed outline appearing sharply triangular *acutifrons*, Blackb.
- CC. Relation of labrum to clypeus such that the outline of the head is not distinctly trilobed..... *rotundifrons*, Blackb.

HETERONYX POTENS, sp. nov.

Sat brevis ; sat convexus ; postice vix dilatatus ; minus nitidus ; obscure æneo-niger ; pilis pallidis parum perspicuis minus crebre vestitus ; capite (clypeo sat crebre ruguloso excepto) prothoraceque sparsius leviter subcrasse, elytris (his substriatis) sparsim leviter crasse, pygidio subobsolete, punctulatis ; labro clypeum anguste leviter superanti ; antennis 9-articulatis ; unguiculis bifidis ; coxis posticis metasterno vix brevioribus. [Long. $2\frac{1}{2}$ - $3\frac{1}{4}$, lat. $1\frac{2}{3}$ -2 lines.

The "trilobed outline" of the head is fairly well-marked, the middle lobe being about as long, but less than half as wide, as either of the lateral ones.

The upper edge of the turned-up labrum rises slightly above the surface of the clypeus ; the latter is concave in front with its

reflexed margin obsolete in the middle and its surface nearly evenly continuous with that of the rest of the head; the clypeal suture is marked by a faint wavy line. The prothorax is a little more than half again as wide as long, its base a little less than half again as wide as its front which is gently concave with sharp but little prominent angles; the sides are very gently arched; the hind angles (viewed from above) appear right angles, but not sharply so; the base is bisinuate, being moderately lobed in the middle; the surface is faintly impressed on the median line. This is one of the few species of *Heteronyx* in which the elytra have some appearance of being punctulate-striate; on careful inspection however it is seen that the lightly impressed puncturation (which is rather small and close near the suture becoming coarse, more sparing and sub-obsolete externally) is not really linear in arrangement but appears so only through the presence of some very obscure longitudinal costæ on which the punctures are more faint than on the general surface; nevertheless there is certainly a *tendency* towards the kind of sculpture that prevails in *Scitala* and other genera; the lateral fringe is not continued round the apex and there is little or no defined membranous border; the costa nearest to the lateral margin (which is practically non-existent till close to the apex) becomes well-defined *at* the apex, and is bent round just within the apex and reaches across towards the suture. The sculpture of the underside is very obscure, consisting on a minutely coriaceous ground of rather large scarcely impressed punctures. The hind coxæ are scarcely shorter than the metasternum. The ventral series consist of hairs and are moderately well-defined. The three teeth on the anterior tibiæ are acute, but the uppermost is very small. The pilosity of the upper surface is much more conspicuous on the head and prothorax, where it has a golden tinge, than on the elytra.

Resembles *H. fortis* (in Sect. I.), and *H. submetallicus*, but differs widely from either in important structural characters. Immature specimens are more or less ferruginous, with a slight metallic tone. The pilosity is very deciduous. The black antennæ of this and some of its allies are characteristic. The produced apex of the

basal piece of the hind claws is slender and more than half as large as the entire apical piece.

Apparently common. I have seen specimens from N. S. Wales, Victoria, and S. Australia.

H. APHODIODES, Blanch.

The information regarding this species supplied by its place in the preceding tabulation added to that furnished in the original description will render it easy of identification. The insect to which I apply the name (and to which Sir W. Macleay also applies it), differs from the description a little in the puncturation of the prothorax which is stated by Blanchard to be "deep," but I find that the punctures although rather *large* are only lightly impressed. *H. aspericollis* has a deeply punctured prothorax, but also has the pygidium strongly punctulate, which in *aphodioides* is said to be "scarcely punctured." If *H. aphodioides* be before me at all it is certainly I think the insect to which I apply the name, and which differs from the description so slightly that I am unwilling to give it a new name. It may be added that some specimens have a faint metallic tinge, and that the produced apex of the basal piece of the hind claws is very little smaller than the entire apical piece. The costæ on the elytra (mentioned by Blanchard) are in reality only very slight,—resembling those of *H. potens* (to which this species is clearly allied)—but distinguish it and some other species from nearly all the genus.

N. S. Wales, apparently common.

H. INCULTUS, sp.nov.

Brevis ; sat latus ; postice dilatatus ; minus nitidus ; niger, ore pedibusque piceis ; pilis sat elongatis pallidis vestitus ; leviter punctulatus ; labro clypeum sat anguste sat fortiter superanti ; antennis 9-articulatis ; unguiculis bifidis.

[Long. $3\frac{1}{5}$, lat. $1\frac{4}{5}$ lines.

The part of the labrum overtopping the clypeus is narrow and the sides of the clypeus are considerably reflexed so that the "trilobed outline" of the head appears well-defined with the middle lobe less than half as wide as the lateral ones and equal to them in length. The clypeus forms a nearly even surface with the rest of the head and its suture is very feeble. The prothorax exactly resembles that of *H. potens*, except in having the hind angles more rounded off and its surface without any indication of a dorsal channel which in *H. potens* seems to be invariably indicated,—at least in the middle of the disc. In other respects the description of *H. potens* may be read as applying to this species with the following exceptions;—the elytra are considerably more pilose and their sculpture though still lightly impressed is very evidently better defined; the hind coxæ are considerably shorter than the metasternum. There is also a marked difference in shape between the two insects, *H. incultus* being in every way a more convex species than *H. potens*; viewed from the side the upper outline of the elytra appears in the former as a well-marked gentle arch evidently *rising* from the scutellum to about the middle of its length, while in *H. potens* it runs backward nearly on a level till it deflects at the posterior declivity. The black club of the antennæ distinguishes this from the majority of species of *Heteronyx*. In the hind claws the produced apex of the basal piece is decidedly stouter, and not much shorter, than the entire apical piece.

Near Adelaide; Sir W. Macleay's collection possesses a specimen attributed to N.S.W. I have seen only these two examples.

H. ASPERICOLLIS, sp.nov.

Elongatus; postice vix dilatatus; sat nitidus; niger; pilis elongatis rufis vestitus; supra crebre rugulose sat crasse punctulatus; antennis basi, palpis, tarsisque, rufescentibus; labro clypeum late minus fortiter superanti; antennis 9-articulatis; unguiculis breviter bifidis.

[Long. $2\frac{2}{3}$, lat. $1\frac{1}{2}$ lines.]

The part of the labrum overtopping the clypeus is wide and but slightly elevated, while the sides of the clypeus are well-reflexed, so that the "trilobed outline" of the head appears only moderately defined, with the middle lobe half as wide, and scarcely so long, as the lateral lobes. The clypeus does not form a continuous surface with the rest of the head from which it is separated by a well-defined sub-angulated suture; its puncturation is finer and closer than that of the rest of the surface. The sculpture of the upper surface is in all respects extremely similar to that of *H. nigellus*, Er., albeit the puncturation of the prothorax is a little closer. The prothorax is a little more than half again as wide as long, its base not much more than a quarter again as wide as the front which is only moderately concave with angles little produced and rather blunt; the sides are gently arched, the hind angles viewed from above appear distinct and almost rectangular; the base is slightly bisinuate and but feebly lobed hindward. The lateral fringe of the elytra is normal, the apical membrane of the same scarcely apparent. The hind coxæ are much shorter than the metasternum and not much wider than the 2nd ventral segment. The puncturation of the under surface is large, sparing, and lightly impressed except on the sides of the metasternum where it is fairly close and deep; on the ventral segments it is very ill-defined. The ventral series consist of long testaceous hairs. The hind femora are moderately wider than the intermediate and have their inner apical portion but little prominent and obtusely angulate. The anterior tibiæ are like those of *H. potens*. The apical piece of the hind claws is scarcely a quarter the size of the basal piece and is very little larger than the produced apex of the latter.

Wagga Wagga, N.S. Wales; in the collection of Sir W. Macleay.

H. ARIDUS, sp.nov.

Sat elongatus; postice minus dilatatus; subnitidus; supra subtilius leviter, crebrius (clypeo paullo crassius) punctulatus;

piceo-niger, vix bronzeo-*micans ; labro et clypei lateribus, rufescentibus ; palpis antennis pedibusque testaceis vel rufis ; sutura clypeali et prothoracis margine antico pilis erectis fimbriatis ; corpore subtus parce sat longe hirsuto ; labro clypeum late leviter superanti ; antennis 9-articulatis ; unguiculis bifidis.

[Long. $2\frac{1}{5}$, lat. 1 line.

The "trilobed outline" of the head is scarcely defined owing to the anterior concavity of the clypeus being filled by the labrum so that from the most favourable point of view (very far back) the outline appears as a continuous scarcely bisinuate curve, with the middle lobe scarcely narrower than the lateral ones. The plane of the clypeus is quite distinct from that of the rest of the head, the clypeal suture being well marked and angulated. The anterior concavity of the clypeus is very wide and very slight. The prothorax is a little less than twice as wide as long, its base rather less than half again as wide as its front, which (viewed from above) is almost truncate with scarcely prominent angles ; the sides are gently arched, but (viewed from above) appear scarcely divergent from base to middle, there subangulated, thence obliquely convergent ; the hind angles appear from above distinct but obtuse, and the basal outline is gently convex all across. The sculpture of the elytra resembles that in *H. potens*, but the puncturation is a little finer, deeper, and closer, and the lateral costæ are scarcely existent—those on the disc also being even feebler than in *potens*. The hind coxæ are quite as long as the metasternum ; the puncturation of the latter being faint but not fine, much closer at the sides than in the middle—of the former almost obsolete except near the lateral margins where it is very sparse and faint. The ventral segments are scarcely punctured at all, the ventral series hardly distinguishable among the similar long hairs scattered thinly over the ventral surface. The hind femora are considerably wider than the intermediate (as in *H.*

* This word (though not classical) seems necessary, as "æneus" is constantly used to express "brassy."

potens), their inner apical angle scarcely defined. The three external teeth of the anterior tibiæ are fairly strong, the uppermost about half as large as the intermediate one. The apical piece of the hind claws is about a quarter the size of the basal and scarcely twice as large as the produced apex of the latter. The bifid apex of the claws is much more minute than in *H. potens*.

Basin of Lake Eyre.

H. BIDENTATUS, sp.nov.

Sat elongatus; postice vix dilatatus; minus nitidus; fusco-testaceus; pilis adpressis minus brevibus sat dense vestitus; capite pygidioque (his pilis erectis plus minus vestitis) sparsius subtilius, prothorace elytris que crebre subtiliter, punctulatis; labro clypeum late fortiter superanti; antennis 9-articulatis; unguiculis bifidis. [Long. 3, lat. $1\frac{2}{5}$ lines.

The "trilobed outline" of the head is scarcely marked, owing to the strong projection of the labrum and the almost obsolete projection of the sides of the clypeus; in the position most favourable for showing a "trilobed outline" the appearance is that of an almost continuous curve suddenly bulging out in the middle—the portion thus bulging out being nearly as wide as the lateral portions. The clypeus does not quite form an even surface with the rest of the head, from which it is separated by a feebly angulated suture; its front is scarcely concave and not distinctly margined. The prothorax is twice as wide as it is long; its base about half again as wide as its front, which (viewed from above) is bisinuate, with feeble angles scarcely produced; it is widest a little in front of the base, its sides being strongly arched, its basal angles scarcely defined from any point of view; its base very feebly convex all across. The elytra show no striation beyond a feebly traceable sutural stria (probably quite obsolete in some examples), their transverse wrinkling quite obsolete, their puncturation very fine and close (a little

more so than in *H. piceus*, Blanch.), their lateral fringe normal, their apical membrane obsolete. The hind coxæ are quite as long as the metasternum, the puncturation of both these being decidedly close and fairly strong at the sides, while in the middle of the latter and about the antero-internal part of the former it is coarse and sparse. The ventral segments are almost lævigatae, the ventral series being very conspicuous and consisting of stout bristle-like hairs. The hind femora are very wide (quite double the intermediate), their inner apical angle obtuse and little prominent. The lower two external teeth of the front tibiæ are very strong and sharp—the uppermost is represented by a mere nick on the outline. The apical piece of the hind claws is evidently less than half as large as the basal piece and decidedly larger than the produced apex (which is truncate at the end) of the latter.

N.B.—The intermediate joints of the antennæ are so crowded together, small, and obscure, that they are very difficult to count with certainty.

Western Australia; taken by E. Meyrick, Esq.

H. DARWINI, sp.nov.

Sat elongatus; convexus; postice leviter dilatatus; sat nitidus; niger, antennis palpisque testaceis; pilis testaceis (et adpressis et erectis) vestitus; supra subcrasse minus crebre punctulatus; labro clypeum anguste fortiter superanti; antennis 9-articulatis; unguiculis bifidis; coxis posticis metasterno haud brevioribus.

[Long. $5\frac{2}{3}$, lat. $1\frac{1}{3}$ lines (vix).

The head closely resembles that of *H. nasutus*, Blackb. The prothorax is $\frac{2}{3}$ again as wide as long, its base scarcely $\frac{2}{3}$ again as wide as its front which is moderately concave with angles but little produced; the sides are gently arched; the hind angles viewed from above appear fairly defined but obtuse; the base is lightly bisinuate, being moderately lobed in the middle. The puncturation of the upper surface is not deep but rather coarse,

and somewhat even but becoming slightly less coarse and sparse continuously from the clypeus hindward ; on the pygidium, however, it is decidedly faint and sparse. The elytra have no distinct trace of striation ; their transverse wrinkling is well defined, their lateral fringe normal, their apical membrane very obscure. The hind coxæ are not shorter than the metasternum. The ventral series consist of stout bristles but are not very conspicuous owing to the presence of numerous fine long hairs on the ventral segments, and they appear to be very deciduous only one of several specimens before me having them in full complement. The metasternum and hind coxæ are punctured rather coarsely and closely but not deeply, the punctures becoming sparser and coarser towards the middle of the former and the antero-internal space of the latter being lævigata. The hind body is punctured very similarly to the metasternum. The hind femora are very much wider than the intermediate, the apex of their inner margin being strongly but not sharply dentate. The lower two teeth on the external margin of the front tibiæ are very strong ; the uppermost is sharp and well defined but less than half as large as the second ; the edge of the tibia from its base to the apex of the uppermost tooth is almost a right line. The produced apex of the basal piece of the hind claws is stout and just about half as large as the entire apical piece.

N. Territory of S. Australia ; taken by Dr. Bovill.

N.B.—Specimens from the same locality in the collections of Sir W. Macleay and the Adelaide University differ only in being of a uniform ferruginous colour.

H. INCOLA, sp.nov.

Sat elongatus ; sat convexus ; postice leviter dilatatus ; sat nitidus ; ferrugineus, antennis testaceis ; pilis fulvis vestitus ; capite crebre, prothorace elytris pygidioque sat sparsim, rugulose leviter punctulatis ; labro clypeum late sat fortiter superanti ;

antennis 9-articulatis ; unguiculis bifidis ; coxis posticis metasterno haud brevioribus. [Long. $3\frac{1}{5}$, lat. 2 lines (vix).

The part of the labrum overtopping the clypeus is very wide and the sides of the clypeus are very little prominent so that from the most favourable point of view the "trilobed outline" of the head appears only feebly developed, with the middle lobe nearly as wide as the lateral ones. The clypeal suture is scarcely marked; the sculpture of the head close and coarse but not deep. The prothorax is slightly more than half again as wide as long, its base not quite half again as wide as its front which is moderately concave with angles but little produced; the sides are gently arched; the hind angles from every point of view appear rounded off; the puncturation is sparing (spaced so that about 15 punctures occupy the length of the middle longitudinal line) and by no means fine, but not deep, and has a slightly rugulose appearance. The elytra are squamosely, lightly and rather sparingly punctulate, their transverse wrinkling is conspicuous, their lateral fringe normal, their apical membrane normal. The hind coxæ are of the same length as the metasternum; the ventral series consist of long hairs. The puncturation of the under surface is fairly close and strong on the sides of the metasternum becoming gradually more sparing hindwards, and also becoming more sparing from all the lateral parts towards the middle, but the hind coxæ have not a very well defined impunctate space except at their extreme inner margin. The hind femora are considerably wider than the intermediate, their inner margin being moderately and roundly produced at the apex. The anterior tibiæ resemble those of *H. Darwini*. The produced apex of the basal piece of the hind claws is stout and about half as large as the apical piece.

A single specimen from Petersburg (S.A.)

H. LIVIDUS, sp.nov.

Minus elongatus ; postice vix dilatatus ; minus nitidus ; lividus (nonnullis exemplis piceo-tinctis) ; pilis brevibus adpressis pallidis

vestitus ; capite prothoraceque fortiter, elytris minus fortiter, sat sparsius punctulatis ; labro clypeum sat leviter sat late superanti ; antennis 9-articulatis ; unguiculis breviter bifidis.

[Long. $2\frac{2}{5}$, lat. $1\frac{1}{5}$ lines (vix).

The "trilobed outline" of the head appears fairly well defined, the middle lobe more than half as wide as, and slightly longer than, the lateral lobes. The clypeus does not form a continuous surface with the rest of the head from which it is separated by a very well defined feebly angulated suture; it is widely and gently emarginated in front with a continuous reflexed margin. The puncturation of the head and prothorax is strong and coarse, rather close on the clypeus, less so hindward. The prothorax is not quite twice as wide as long, its base nearly half again as wide as its front which is gently concave, with slightly prominent angles; the sides are very gently arched, the basal angles scarcely defined from any point of view; the base is scarcely bisinuate or lobed. The elytra are punctured much as the prothorax but scarcely so strongly, their transverse wrinkling is scarcely apparent, their lateral fringe normal but not at all strong, their apical membrane fairly defined. The puncturation of the pygidium (which is clothed with long erect hairs) is very sparing but rather coarse. The hind coxæ are considerably shorter than the metasternum and longer than the 2nd ventral segment; these, and the metasternum are rather closely set with very large deep punctures which do not become much more sparing towards the middle; the puncturation of the ventral segments is sparing and not very strong on the sides, but almost entirely obsolete in the middle. The ventral series consist of long fine hairs and are but little conspicuous. The hind femora are much wider than the intermediate and their inner apical angle is scarcely prominent and quite rounded off. The three external teeth of the anterior tibiæ are all well defined and sharp,—the lower two very strong,—the uppermost scarcely half as large as the 2nd. The apical piece of the hind claws is very minute,—much less than a quarter the size of the basal piece

and is stouter, but very little longer than the produced apex of the latter.

This species bears much resemblance to an *Aphodius*.

N. Territory of S. Australia ; taken by Dr. Bovill.

H. SUBFUSCUS, MacL.

Sir W. Macleay has forwarded a specimen of this insect to me. To the characters mentioned by him (P.L.S.N.S.W., 1888, p. 916) it will be well to add the following ; antennæ 9-jointed, "trilobed outline" of head fairly defined (the middle lobe being more than half as wide as the lateral ones), hind coxæ decidedly shorter than metasternum and decidedly longer than 2nd ventral segment, uppermost tooth on external margin of front tibiæ much less than half as large as the middle tooth, apical piece of hind claws about half as large as the basal piece and quite twice as large as the produced apex of the latter.

H. BOREALIS, sp.nov.

Elongatus ; postice vix dilatatus ; minus nitidus ; ferrugineus ; pilis brevibus adpressis pallidis vestitus ; sat æqualiter sat crebre minus subtiliter punctulatus ; labro clypeum fortiter sat anguste superanti ; antennis 9-articulatis ; unguiculis bifidis.

[Long. $3\frac{1}{5}$, lat. $1\frac{2}{5}$, lines.

The "trilobed outline" of the head appears distinct, but irregular, —owing to the slight convexity of the lateral lobes as compared with the middle one which appears considerably longer and scarcely more than half as wide as the former. The clypeus almost evenly continues the plane of the rest of the head from which it is separated by a fairly defined scarcely angulated suture ; its front is widely and feebly concave with the reflexed margin not carried distinctly across. The prothorax is not much less than twice as wide as long, its base about half again as wide as its front which is bisinuate with slightly produced angles ; the sides are very

gently arched, the basal angles much rounded off; the base is gently bisinuate and feebly lobed hindward in the middle. The transverse wrinkling of the elytra is very slight, their lateral fringe normal, their apical membrane narrow but distinct. On the head, front of prothorax, and pygidium are a few long erect hairs. Owing to the want of transverse wrinkles on the elytra the sculpture has a distinctive appearance; perhaps of the commoner species hitherto described *H. testaceus*, Blackb., comes nearest to it in that respect, but has somewhat finer sculpture throughout. The hind coxæ are much shorter than the metasternum and very decidedly longer than the 2nd ventral segment; they and the metasternum are rather sparingly and strongly punctured at the sides,—the former being impunctulate, the latter finely punctulate, internally. The puncturation of the ventral segments is much finer than that of the sides of the metasternum but is continuous all across. The ventral series consist of coarse red hairs but are rather inconspicuous. The hind femora are not much wider than the intermediate, their inner apical angle being fairly defined but scarcely prominent. The three external teeth of the anterior tibiæ are extremely robust and sharp, the uppermost being about half as large as the middle one. The apical piece of the hind claws is scarcely a quarter the size of the basal piece and is scarcely so large as the produced apex of the latter. The basal joint of the hind tarsi is very distinctly shorter than the second.

The real allies of this species appear to be among the group with 8-jointed antennæ,—*H. piger*, *lateritius*, &c., to some of which it bears much resemblance. From *H. subfuscus*, Macl., it differs *inter alia* by its much more strongly and narrowly elevated labrum.

N. Territory of S. Australia; taken by Dr. Bovill.

H. SPARSUS, sp.nov.

Sat elongatus; postice vix dilatatus; sat nitidus; ferrugineus (exempli typici capite prothoraceque obscurioribus); pilis brevibus

adpressis pallidis vestitus; capite crebre rugulose, prothorace elytrisque sparsim fortius, pygidio obsolete, punctulatis; labro clypeum leviter late superanti; antennis 9-articulatis; unguiculis bifidis. [Long. $3\frac{1}{5}$, lat. $1\frac{3}{5}$ lines (vix).

The "trilobed outline" of the head appears fairly defined,—the middle lobe shorter than, and considerably more than half as wide as, the lateral lobes. The clypeus does not form an even surface with the rest of the head from which it is separated by a well-defined straight suture; its front is rather strongly concave with the reflexed margin very finely continuous in the middle. The prothorax is $\frac{3}{4}$ again as wide as long, its base about half again as wide as its front which is gently concave with very feeble angles; the sides are gently arched, the hind angles quite rounded off; the base is scarcely bisinuate and rather strongly convex hindward all across. The elytra are punctured a little more closely than the prothorax, their transverse wrinkling is very slight, their lateral fringe normal, their apical membrane scarcely distinct. The hind coxæ are decidedly shorter than the metasternum and not much longer than the 2nd ventral segment; the metasternum is rather sparsely and feebly punctured at the sides, more sparsely and strongly towards the middle; the hind coxæ are rather coarsely punctured except a small lævigate intero-anterior portion. The ventral segments are feebly and sparingly punctured at the sides, almost lævigate in the middle. The ventral series are fairly conspicuous, consisting of long stoutish hairs. The hind femora are not much wider than the intermediate, their inner apical angle ill-defined. The three external teeth of the anterior tibiæ are well-defined but not particularly acute, the uppermost being less than half as large as the middle one. The hind claws scarcely differ from those of *H. borealis*. The basal joint of the hind tarsi is distinctly shorter than the 2nd joint.

The puncturation of this species is exceptionally sparse,—on the prothorax as much so as in *H. Augustæ*, Blackb.,—on the elytra scarcely closer than on the prothorax.

N. Territory of S. Australia; taken by Dr. Bovill.

H. ACUTIFRONS, sp. nov.

Minus elongatus; postice dilatatus; minus nitidus; testaceo-ferrugineus, capite prothoraceque nonnihil obscurioribus; elytris pilis brevibus erectis minus crebre vestitis; clypeo crassissime rugulose, capite postice prothoraceque sparsius leviter nec rugulose, elytris sat fortiter subrugulose, pygidio (hoc setis longis vestito) sparsim obscure, punctulatis; labro clypeum late triangulariter sat fortiter superanti; antennis 9-articulatis; unguiculis bifidis.

[Long. $2\frac{4}{5}$, lat. $1\frac{3}{5}$ lines (vix).

The "trilobed outline" of head is very peculiar, the middle lobe (which is longer, and scarcely narrower, than the lateral lobes) being acutely triangular. The clypeus is very distinct from the rest of the head, from which it is separated by a strong angulated suture, its front being widely and rather strongly concave with the reflexed margin obsolete in the middle. The prothorax is twice as wide as long, its base scarcely half again as wide as its front, which is gently concave, with scarcely produced angles; the sides are strongly rounded, the hind angles quite rounded off, the base gently convex all across, evenly continuing the curve of the angles. The elytra are punctured more strongly and very much more closely than the prothorax; their transverse wrinkling is fairly defined, their lateral fringe normal, their apical membrane obsolete. The hind coxæ are decidedly shorter than the metasternum and decidedly longer than the 2nd ventral segment; the puncturation of the metasternum is well defined, and rather strong and close at the sides, but the middle is almost lævigatè; the hind coxæ are almost without puncturation. The ventral segments are punctured sparingly and coarsely all across; the ventral series are scarcely conspicuous the whole ventral surface being clothed somewhat densely with fine long hairs. The hind femora are not much wider than the intermediate, their inner apical angle is but slightly defined. The three external teeth of the front tibiæ are fairly strong, the uppermost being about half as large as the middle one. The apical piece of the hind claws is

about $\frac{1}{3}$ the size of the basal piece and nearly twice as large as the produced apex (which is truncate at its end) of the latter. There is a conspicuous fuscous spot on the prothorax near the lateral margin on either side.

This is an extremely distinct species.

Yorke's Peninsula.

N.B.—This species must be near *H. pellucidus*, Burm., but if I am right in thinking that I have both sexes before me, the anterior claws of the male are quite different; also the anterior tibiæ seem to be differently toothed; it seems unlikely that Dr Burmeister could have failed to note the very peculiar angulation of the labrum, or the spots (apparently quite constant) on the prothorax. The description of the puncturation also does not agree very satisfactorily.

H. ROTUNDIFRONS, sp.nov.

Minus elongatus; postice dilatatus; sat nitidus; ferrugineus, antennarum clava testacea; pilis erectis minus crebre vestitus; clypeo crebrius minus crasse, capite postice prothoraceque fortiter sparsim, elytris squamose fortiter minus sparsim, pygidio sparsim subtilius, punctulatis; labro clypeum late vix perspicue superanti; antennis 9-articulatis; unguiculis bifidis. [Long. $4\frac{2}{5}$, lat. $2\frac{1}{5}$ lines.

The labrum rises so slightly above the clypeus and the sides of the latter are so feebly reflexed that (from the point of view most favourable for observing a "trilobed outline" of the head) the front outline appears an almost even curve, the convexity of which however is a little greater in the middle than it would be if the curve were quite even. The clypeus does not form an even surface with the rest of the head,—from which it is separated by an almost straight suture; its front is scarcely concave, but is without a reflexed margin. The prothorax is about $\frac{2}{5}$ again as wide as it is long; its base about half again as wide as its front, which is feebly concave with angles but little produced; it is widest a little behind the middle its sides being rather strongly arched, its basal

angles well marked but obtuse, its base (from a certain point of view) distinctly bisinuate and moderately lobed hindward. The elytra have little or no indication of striation,—at most some semblance of a sutural stria,—their transverse wrinkling is fairly defined from some points of view, their lateral fringe normal, their apical membrane obsolete. The hind coxæ are decidedly shorter than the metasternum and decidedly longer than the 2nd ventral segment; the puncturation of both these is at the sides strong but not close, being on the latter very sparing towards the middle, and the former having a small lævigata antero-internal space. The ventral segments are punctured at the sides rather finely and closely, in the middle more coarsely and sparsely, the punctures there tending to a linear transverse arrangement. The ventral series consist of fine long hairs and are not very conspicuous. The hind femora are evidently wider than the intermediate, their inner apical angle much rounded and but little prominent. The three external teeth of the anterior tibiæ are thick and blunt, the uppermost about half as large as the 2nd. The apical piece of the hind claws is nearly half as large as the basal piece and not much larger than the produced apex of the latter.

Taken by Mr. T. G. Sloane at Albury, N.S.W.